NEW JERSEY DREDGING PROJECTS
SEDIMENT SAMPLING AND ANALYSIS PLAN (SSAP) TEMPLATE

(Version 2.2; 11/9/2016)

Before completing this SSAP template, please determine if the proposed project qualifies for any of the testing exclusions identified in N.J.A.C. 7:7 Appendix G and contact the Department's Office of Dredging and Sediment Technology to receive a confirmation that the testing exclusion is applicable to the project.

The major objective of a SSAP is to accurately characterize the horizontal and vertical distribution of the physical/geotechnical properties and contaminant concentrations of the sediment to be dredged.

This document serves as the template to develop the SSAP for a proposed dredging project. It identifies the information required by the Department to review, and ultimately approve, the SSAP for the project. The required information must be provided to the Department by entering it into the spaces provided on this template, and submitting two hard copies and one CD of the additional required documents.

The SSAP for a dredging project must be approved by the Department prior to the collection and analysis of any sediment samples. Once the final SSAP has been approved by the Department, the applicant may conduct sampling in conformance with the plan. **If the applicant collects and analyzes any sediment samples without the approval of NJDEP-ODST, he/she does so at their own risk, as any such samples may or may not be considered by the Department in making regulatory decisions regarding the proposed project.**

For additional information, see *The Management and Regulation of Dredging Activities and Dredged Material in New Jersey's Tidal Waters* found in Appendix G of the Coastal Zone Management Rules (N.J.A.C. 7:7). Appendix G can be accessed at: http://www.nj.gov/dep/landuse/lawsregs.html. This SSAP template incorporates much of what is required to be submitted by applicants in Appendix G as part of the permit application for a dredging project; however, additional information may be required on a project-specific basis.

Complete pages 2-7, 10 of the SSAP template, attach any additional required documents, and send the complete draft SSAP package to 501 E. State Street, Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420. Please include an electronic (MS Word) copy in the CD requested on page 3 of this document.

Approval of the SSAP will be indicated by the signature of a Department staff person on page 12 of the completed template.

If you have any questions, please contact the Department's Office of Dredging and Sediment Technology at (609) 633-1357.

Division of Land Use Regulation
Dredging Sampling and Analysis Plan (SAP) File Number Request Form

Site Info:

Site Address:	**City:**	**State:**	**Zip:**
Site County:	**Municipality(ies):**		
Site Block(s):	**Lot(s):**		
Site NJ State Plane Coordinates	**X:**	**Y:**	
Project Description:			
Previously Issued Permit No/s.: (If applicable, please provide a copy of the permit)			

Applicant Info:

Applicant Name:		
Phone Number:	**Email Address:**	
Address:		
City:	**State:**	**Zip:**

Agent Info (if any):

Agent Name:		
Phone Number:	**Email Address:**	
Address:		
City:	**State:**	**Zip:**

Proposed Dredging Plan

Method of dredging: ☐ Hydraulic ☐ Mechanical

Type of Dredging: ☐ Maintenance (set at N.J.A.C. 7:7-12.6) ☐ New Dredging

Provide NJDEP-ODST with **two hard copies and one PDF version (on a CD)** of the Draft Dredging Plan.

The Proposed Dredging Plan includes the following components:

☐ A figure identifying the geographic location of the project site.

☐ Identify the locations of all outfalls or intakes within 500' of the project site

☐ Identify all in-water structures in the vicinity of the project site.

☐ Identify the location of boat/vessel fueling stations within 500' of the project site.

☐ Hydrographic survey (see N.J.A.C. 7:7 Appendix G, Chapter II-A-2) bathymetry (include the date the hydrographic survey was conducted – this must be within 6 months of the SSAP submittal date)

☐ Proposed sample locations (see page 6) referenced to Mean Low Water (MLW)

Superimposed on the hydrographic survey:

☐ Identify the horizontal extent of the area to be dredged.

☐ Proposed depth(s) of dredging (feet below MLW) _____

☐ Proposed depth(s) of overdredge (feet below MLW) _____

☐ Estimated volume of sediment to be dredged (including overdredge) (cubic yards) _____

Inventory of Environmental Features

Are any of the following Special Areas (see CZM Rules at N.J.A.C. 7:7-9) located in the vicinity of the proposed dredging project or dredged material placement site? (check the box) Information about many of these features can be found on the Department's GEO-Web site.

Shellfish habitat (7:7-9.2)	☐ Yes ☐ No ☐ Unsure
Prime fishing areas (7:7-9.4)	☐ Yes ☐ No ☐ Unsure
Finfish migratory pathways (7:7-9.5)	☐ Yes ☐ No ☐ Unsure
Submerged vegetation habitat (7:7-9.6)	☐ Yes ☐ No ☐ Unsure
Wetlands (7:7-9.27)	☐ Yes ☐ No ☐ Unsure
Wetlands buffers (7:7-9.28)	☐ Yes ☐ No ☐ Unsure
Historic and archaeological resources (7:7-9.34)	☐ Yes ☐ No ☐ Unsure
Endangered or threatened wildlife/plant species habitat (7:7-9.36)	☐ Yes ☐ No ☐ Unsure
Special hazard areas (7:7-9.39)	☐ Yes ☐ No ☐ Unsure
Critical wildlife habitats (7:7-9.37)	☐ Yes ☐ No ☐ Unsure
Dredged material management area (7:7-9.49)	☐ Yes ☐ No ☐ Unsure

Known Contaminated Spills _____

Other _____

In the space below (or as a separate attachment), provide a brief description of potential project impacts to any of the Special Areas that were identified with a "Yes" above:

Proposed Dredged Material Management Alternative(s)

Check applicable box(es) and identify location(s) in the space provided.

☐ Confined Disposal Facility

☐ Processing Facility

☐ Beneficial Use

Type of Beneficial Use: _____

Dewatering Method: ☐ Geotubes

☐ Filter Press

☐ Temporary Dewatering Area (Ex; hay bales/silt fences, on barges)

Description: _____

Other: _____

Dredge Material Management Location (street address and provide State plane coordinates):
(Please any relevant information for identifying the site such as CDF name if applicable)

_____

Sediment Core Sample Locations (check if attached)

Proposed dredging plan showing proposed core sample locations ☐

Request Department to identify core sample locations? ☐ Yes ☐ No

Guidance on determining the proper number of cores for a project and appropriate core locations can be found in Section D of Chapter III of Appendix G.

* Depth of Collection is project depth (plus proposed over-dredge) in feet below Mean Low Water (MLW).

Provide the information in the following table (expand as needed):

Sample ID Number	Location: Planned X	Location: Planned Y	Project Depth MLW	Proposed Overdredge	*Depth of Collection

Notes: The latitude and longitude of the planned sample locations can be approximated using NJ Geoweb or a similar mapping application. All coordinates shall be in the **NJ State Plane Coordinate System**.

Planned Core Sample Compositing Scheme

Request Department to identify core sample compositing scheme? ☐ Yes ☐ No

Please refer to Section D of Chapter III of Appendix G for core composite guidance and rationale.

Provide the information in the following table (expand table as needed):

Composite Sample ID Number	Core Sample ID Numbers

Pages 8 and 9 to be completed by NJDEP-ODST – Proceed to Page 10

Required Sediment Sampling Tests

Tier I - Physical/geotechnical (Required for all projects)

- ☒ Grain size distribution (ASTM D422 or D4381)
- ☒ Total Organic Carbon (USEPA 440.0)
- ☒ Water Content (ASTMD653, D2216, or D4643)

Individual sediment core samples comprised of greater than **90% sand** (analyzed using the **hydrometer** method) are excluded from **Tier II Testing** (chemical and biological testing), and must not be composited with other sediment samples.

Representative subsamples of each homogenized core sample (or distinct strata) and composite analytical sample are collected and analyzed for grain size distribution, Total Organic Carbon (TOC), and percent moisture.

Tier II – Structural Fill Protocol (attached) ☐

Tier II - Bulk Sediment Chemistry ☐

Tier II - Effluent (Modified) Elutriate ☐

Tier II - Elutriate ☐

Tier III - Sequential Batch Leaching Test ☐

Tier III - Synthetic Precipitation Leaching Procedure ☐

Tier III - Biological – Toxicity ☐

Tier III - Biological – Bioaccumulation ☐

Other – Project Specific _____ ☐

Representative subsamples of each composite (or individual) sample are collected and subjected to Bulk Sediment Chemistry, Elutriate, Effluent (Modified) Elutriate, SPLP, and/or biological testing as specified in the SSAP.

***Please note any proposed management site that is not included in this sampling plan may require additional testing

Bulk Sediment Chemistry Analysis

☐ Semi-Volatile Compounds

☐ Volatiles (VOCs)

☐ Polychlorinated dibenzo dioxins and furans (PCDDs and PCDFs; 17 congeners)

☐ Polychlorinated biphenyls (PCBs): ☐ Aroclors or ☐ PCB Congeners (209)

☐ Organochlorine Pesticides

☐ Inorganics (including hexavalent and trivalent chrome)

Effluent (Modified) Elutriate Analysis

☐ Semi-Volatile Compounds

☐ Volatiles (VOCs)

☐ Polychlorinated dibenzo dioxins and furans (PCDDs and PCDFs; 17 congeners)

☐ Polychlorinated biphenyls (PCBs): ☐ Aroclors or ☐ PCB Congeners (209)

☐ Organochlorine Pesticides

☐ Inorganics (including hexavalent and trivalent chrome)

Analytical Requirements

All analytical procedures must be conducted by a laboratory certified by the Department to conduct that procedure pursuant to the Regulations Governing the Certification of Laboratories and Environmental Measurements (N.J.A.C. 7:18) or the National Environmental Laboratory Accreditation Program (NELAP).

The achieved analytical detection limits for all contaminants in the Target Analyte List must be less than the applicable regulatory criteria and guidance values to which the data will be compared when evaluating the potential impacts of the proposed project. Where the Practical Quantitation Limit (PQL) for a contaminant is greater than the applicable regulatory criteria, the analytical detection limit must not exceed the PQL.

Bulk Sediment Chemistry/Upland Placement – NJDEP Residential Soil Remediation Standards

http://www.nj.gov/dep/rules/rules/njac7_26d.pdf

Bulk Sediment Chemistry/Aquatic Placement – NJDEP Ecological Screening Criteria

http://www.nj.gov/dep/srp/guidance/ecoscreening/

Elutriate and Effluent (Modified) Elutriate – NJDEP Surface Water Quality Standards (acute and chronic; saline and/or freshwater, as appropriate)

http://www.nj.gov/dep/rules/rules/njac7_9b.pdf

Leaching tests – NJDEP Ground Water Quality Standards

http://www.state.nj.us/dep/wms/bwqsa/gwqs.htm

Sampling Plan Implementation Requirements

If implementation of the approved SSAP does not provide data that are representative of, or fully characterizes, the sediment to be dredged, the Department may require the collection and analyses of additional sediment samples.

Sediment core sampling collection procedures must be consisted with those in the NJDEP Field Sampling Procedures Manual (2005), available at http://www.state.nj.us/dep/srp/guidance/fspm/ .

In the space below, provide a brief description of how the sediment samples will be collected, stored/preserved, and shipped to the analytical laboratory:

Identify the organizations that will conduct the following activities:

Sediment samples will be collected by: _____

Sediment samples will be homogenized by: _____

Sediment samples will be composited by: _____

(1) The Department must be notified of any deviations from the approved SSAP prior to the homogenizing, compositing, and analysis of the collected sediment samples.

(2) All sediment core sample collection activities must be properly documented. Detailed field notes/observations during sampling must be documented in a field sampling log book.

(3) NJDEP GPS Data Collection Standards must be used for positioning methods when locating all sampling points. *New Jersey Department of Environmental Protection, 2011. NJDEP GPS Data Collection Standards for GIS Data Development, June 8, 2011, 11 pp.*

(4) All sampling equipment must be properly cleaned before and after the collection of each individual sediment core sample.

(5) An inert plastic liner must be used in conjunction with each sediment core sampling device; this plastic liner must not be reused.

(6) All individual sediment core samples are to be taken to the sediment characterization depth, as specified in this document, and not any deeper.

(7) When collecting sediment core samples, the project applicant must ensure that a sufficient volume of sediment is collected to conduct all of the tests (physical and geotechnical, chemical, biological) specified in the approved SSAP.

(8) Individual sediment core samples must be photographed prior to homogenization, with the sample identification number, a length scale, and date included in the photograph.

(9) Provide core logs showing the depth of sampling (below the sediment surface and Mean Low Water) and a qualitative description of the sediment for each individual sediment core sample.

(10) Only sediment core samples collected correctly may be homogenized, composited, and analyzed.

(11) Individual sediment core samples may be homogenized in their entirety for analysis provided that there no distinct strata (apparent grain size distribution, composition, and visual characteristics) present that are greater than two (2) feet in depth. The Department shall be notified of any sediment core samples that show grain size stratification prior to homogenizing.

(12) The entire sediment core sample (or distinct strata, when present) must be homogenized – "representative" sub-samples of a non-homogenized sediment core sample must not be collected, composited, and analyzed.

(13) Individual sediment core samples may be composited only if the grain size distribution of the sediment is similar. Individual samples should not be composited if the percentage clay, silt, or sand differ by more than 20%. The Department shall be notified of any sediment core samples that show varying grain size distribution prior to compositing samples.

(14) Representative subsamples of each homogenized core sample (or distinct strata) are combined in equal proportions (by mass) to form the composite analytical sample.

(15) The sample preservation requirements and holding times for each analysis, as specified in the analytical methods used, must be adhered to, or proposed alternatives approved by the Department prior to analysis.

(16) Sample Chain of Custody requirements must be consistent with those specified in the NJDEP Field Sampling Procedures Manual (2005).

(17) If implementation of the approved SSAP does not provide data that are representative of, or fully characterizes, the sediment to be dredged, the Department may require the collection and analyses of additional sediment samples.

(18) Analytical laboratories must follow all of the required QA/QC procedures specified in the analytical methods used. Any deviations from these procedures must be documented and justified in the Analytical Data Report.

(19) All routine procedures associated with the sampling, handling, transport, storage, preservation, and analysis of the sediment should be specified in Standard Operating Procedure (SOP) documents maintained by the parties actually collecting and analyzing the sediment.

SSAP Certifications

☐ I certify that I provided accurate information and will comply with the requirements listed in the approved Sediment Sampling and Analysis Plan.

Printed Name:

Signature:

Date:

Department Review and Approval (Department signature upon approval)

☐ The Department hereby approves the Sediment Sampling and Analysis Plan dated for implementation.

Department Staff:

Signature:

Date: